

Listing of claims

1. (Previously Presented) Current measurement apparatus comprising a Rogowski coil wherein the Rogowski coil comprises a coil and a central conductor extending through the coil wherein a single homogeneous wire forms both the coil and the central conductor and said homogeneous wire is insulated prior to forming the Rogowski coil.
2. (Previously Presented) Current measurement apparatus according to claim 1 in which the wire is insulated by insulating material.
3. (Previously Presented) Current measurement apparatus according to claim 2 in which the insulating material is resistant to physical damage.
4. (Previously Presented) Current measurement apparatus according to claim 2 in which the complete outer surface of the wire is coated with an insulating material.
5. (Previously Presented) Current measurement apparatus according to claim 4 in which the complete outer surface of the wire is coated with an insulating material which provides reinforced insulation.
6. (Previously Presented) Current measurement apparatus according to claim 2 in which the insulating material comprises a wrapping for the wire.
7. (Previously Presented) Current measurement apparatus according to claim 2 in which the insulating material is an extrusion.

8. (Cancelled).

9. (Previously Presented) Current measurement apparatus according to claim 1 in which the insulation coating is less than or equal to 0.125 mm.

10. (Previously Presented) Current measurement apparatus according to claim 1 in which the Rogowski coil is formed by providing a straight central conductor section and winding a coil around at least a part of the straight electrical conductor section.

11. (Previously Presented) Current measurement apparatus according to claim 1 in which the Rogowski coil comprises an inner sheath.

12. (Previously Presented) Current measurement apparatus according to claim 1 in which the wire comprises copper wire.

13. (Previously Presented) Current measurement apparatus according to claim 1 in which the Rogowski coil comprises an end wherein the end does not require an insulation cap.

14. (Previously Presented) Current measurement apparatus according to claim 1 in which the wire comprises a plurality of layers of insulating material.

15. (Previously Presented) Current measurement apparatus according to claim 1 in which the Rogowski coil comprises a first end and a second end.

16. (Previously Presented) Current measurement apparatus according to claim 15 in which, in use, the first end is arranged, in use, to locate adjacent to the second end.

17. (Previously Presented) Current measurement apparatus according to claim 15 in which, a first end member located on the first end is arranged, in use, to engage a second end member located on the second end.

18. (Previously Presented) Current measurement apparatus according to claim 1 in which a first end member located on one end of the Rogowski coil is arranged, in use, to cooperate with a second end member located on a second end of the Rogowski coil.

19. (Previously Presented) Current measurement apparatus according to claim 1 in which, in use, a first end of the Rogowski coil is arranged, in use, to cooperate with a second end member located on the second end of the Rogowski coil in order to form a contiguous loop.

20. (Previously Presented) Current measurement apparatus according to claim 1 in which a first end of the Rogowski coil is arranged to magnetically cooperate with a second end of the Rogowski coil.

21. (Previously Presented) Current measurement apparatus according to claim 17 in which the first end member comprises a female member and the second end member comprises a male member.

22. (Previously Presented) Current measurement apparatus according to claim 17 in which the first end member is arranged, in use, to be secured to the second end member solely by magnetic force.

23. (Currently amended) A method of forming current measurement apparatus comprising forming a Rogowski coil having a coil and a central conductor extending through the coil forming said coil and center conductor from a single homogeneous ~~insulated-wire~~ conductor, said homogeneous conductor is insulated ~~insulated-wire~~.

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (Cancelled)

29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Currently Amended) A Rogowski coil having a coil and a central conductor extending through a center of the coil, ~~and~~ a single homogeneous conductor ~~insulated-wire~~ which is seamless forms both the coil and the central conductor, and the homogeneous conductor is insulated.